



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/823,300	04/13/2004	David Mayhew	659P007	4770

42754 7590 04/14/2006
NIELDS & LEMACK
176 EAST MAIN STREET, SUITE 7
WESTBORO, MA 01581

EXAMINER

YU, JAE UN

ART UNIT PAPER NUMBER

2185

DATE MAILED: 04/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/823,300	Applicant(s) MAYHEW ET AL.	
	Examiner Jae U. Yu	Art Unit 2185	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The instant application having Application No. 10823300 has a total of 8 claims pending in the application, there are 3 independent claims and 5 dependent claims, all of which are ready for examination by the examiner.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
2. Claim 6 recites the limitation "the data element" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section

351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-7 are rejected under 35 U.S.C. 102(e) as being anticipated by Khare et al. (US 2003/0131201).

2. Independent claim 1 and 7 disclose, “a plurality of computing subsystems **[Elements 280, 220 and 240, Figure 2]**, each subsystem comprising a processing unit **[Processor “P”, Figure 2]** and a local cache memory element **[Cache Memory “M”, Figure 2 & “Cache State of Each Node” 291, Figure 2]**”.

“A network switching element **[“SP Switch (SPS)” 290, Figure 2]** comprising a plurality of ports and a storage element **[Cache State Storage 291, Figure 1]**, each of said plurality of subsystems being in communication with a different port **[Communications via “SPS” 258, 256, 252, 257, 255, 254 and 253 (Ports are inherent), Figure 2]** of said network switching element”

“Said switching element being adapted to monitor transactions **[Monitoring data Access by another node (“Subsystem” from the claim), Paragraph 38]** transmitted via said ports and generated by said plurality of subsystems”

“Interpret said transactions to determine the status of each of said cache memory elements **[Updating the status of the cache based on the data access, Paragraph**

38], and store said status information in said storage element **[Cache State 291, Figure 2]**”

“Route future transactions to a subset of said subsystems **[Route the read request to the cache of the “Responding Node” 350, Figure 7, Paragraphs 36-37]** based on said stored status information **[Elements 320 & 330, Figure 3]**”

3. **Claim 2** discloses, “said status information comprises the states of invalid, modified, shared and exclusive **[Abstract]** for each cache line in each of said local cache memory elements **[Cache State 291, Figure 2]**”.

4. **Claim 3** discloses, “said status information further comprises the state of owner **[“Ambiguous State of Responding Node” wherein the “Responding Node” has ownership 330 & 340, Figure 3]**”.

5. **Claim 4** discloses, “a shared memory **[“Cache” in “I/O Node”, Paragraph 28, Figure 1]** accessible to each of said plurality of subsystems **[Element 110, Figure 1]** in communication with said switching element **[“SPS”, Figure 2]**”.

6. **Claim 5** discloses, “said transactions comprise memory read **[“Read Request” 310, Figure 3]**, memory write **[Data Write 550, Figure 5]** and cache invalidate operations **[“Invalid State”, Paragraph 29]**”.

7. **Claim 6** discloses, "said subset of systems comprises subsystems [**"SNC & Memory" 140 & 130, Figure 1**] in which the cache memory contains the data element [**"Modified Data" 740, Figure 7**] described in said future transaction".

8. **Claim 8** is rejected under 35 U.S.C. 102(b) as being anticipated by Kinghorn et al. (US 5,184,220).

9. **Independent claim 8** discloses, "receiving a first transmission [**"Subtitles", Column 1, Line 46**] via said first port [**Input for the "transmission network", Column 1, Line 45-46**]".

"Identifying said first transmission as a time critical transmission [**Subtitle transmission is time critical, Column 1, Lines 41-43**]"

"Sending said first transmission [**"Subtitles", Column 1, Lines 46**] via said second port [**Output for the "transmission network", Column 1, Lines 45-46**] if said second port is idle" Kinghorn et al. disclose interrupting current output making the output port idle, so the subtitles are allowed to transmit in Column 1, Lines 45-60.

“Interrupting a second transmission [**Interrupting the transmission of a normal teletext, Column 1, Lines 45-50**] currently in progress via second port [**Output for the “transmission network”, Column 1, Lines 45-46**]”

“Transmitting a first delimiter [**Transmitting a subtitle page header, Column 1, Lines 52-53**] to notify recipient of said second transmission that said second transmission is being interrupted”

“Transmitting said first transmission [**Transmitting the subtitles, Column 1, Lines 45-60**] via said second port [**Output for the “transmission network”, Column 1, Lines 45-46**]”

“Transmitting a second delimiter [**Transmitting the page header for the normal teletext and the page header for the subtitles, Column 1, Lines 53-60**] to notify recipient of said first and second transmissions that said first transmission has been sent [**Subtitles Page Header as “End of Page Signal”, Column 1, Lines 68-60**] and said second transmission is being resumed [**Normal teletext transmission resumed, Column 1, Lines 50-55**]”

“Transmitting the remainder [**Transmitting the remainder of the normal teletext, Column 1, Lines 53-60**] of said second transmission”

Relevant Art Cited by the Examiner

The following prior art made of record and not relied upon is cited to establish the level of skill in the applicant's art and those arts considered reasonably pertinent to applicant's disclosure. See MPEP 707.05(c).

The following reference teaches cache coherency system.

U.S. PATENT NUMBER

FIGURES

09/437176

1-5

Conclusion

A. Claims Rejected in the Application

Per the instant office action, claims 1-8 have received a first action on the merits and are subject of a first action non-final.

B. Direction of Future Correspondences

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jae U. Yu whose telephone number is 571-272-1133.

The examiner can normally be reached on M-F 9AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald A. Sparks can be reached on 571-272-4201. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2185

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

April 12, 2006

Jae Un Yu
Art Unit 2185

A handwritten signature in black ink, appearing to read "Donald Sparks", is written over a circular stamp.

DONALD SPARKS
SUPERVISORY PATENT EXAMINER